



Delaware River Basin Commission

**DELAWARE • NEW JERSEY
PENNSYLVANIA • NEW YORK
UNITED STATES OF AMERICA**

DELAWARE RIVER BASIN COMMISSION

P.O. BOX 7360
25 STATE POLICE DRIVE
WEST TRENTON, NEW JERSEY 08628-0360

Phone: (609) 883-9500 Fax: (609) 883-9522

Carol R. Collier
Executive Director

December 3, 2004

REQUEST FOR PROPOSAL & QUOTATION

To Whom It May Concern:

The Delaware River Basin Commission (DRBC) is performing a demand forecasting/projections study in the Pennsylvania portion of the Delaware River Basin in support of the Commonwealth of Pennsylvania's efforts to prepare a state-wide water resources plan. The DRBC is seeking a qualified firm or individual(s) (the contractor) to develop water demand projection methodologies for a variety of water-using sectors. At the option of the DRBC, the contractor may be asked to perform a demand projection pilot study implementing the methodologies in a selected watershed.

The DRBC is an interstate/federal regulatory agency that manages water resources in the Delaware River Basin. Under funding provided for development of the state water resources plan, the DRBC will work in cooperation with the Pennsylvania Department of Environmental Protection (PADEP) to further key elements of the Act 220 legislation.

This Request for Proposals (RFP) outlines planned activity during FY2005 (ending June 2005); it is anticipated that future work related to the preparation of the State Water Plan and the calculation of demand projections in the Delaware, Susquehanna and other river basins in Pennsylvania will be required.

Understanding future water demand is vital to ensuring an adequate and reliable water supply for all users of the resource. The water demand projections will assist the PADEP in developing the State Water Plan as well as identifying Critical Water Planning Areas (CWPAs). The principal task under this RFP is for the contractor to develop demand projection methodologies suitable for calculating future water demands for several key water-using sectors in Pennsylvania. A subsequent task, to be awarded at the option of the DRBC, is to perform a pilot project which will demonstrate the applicability of the projection methodologies by performing demand projections in a watershed within the Delaware River Basin. While the initial projections will be developed for the Delaware River Basin, the methodologies utilized will need to be applicable statewide. The proposed planning period for demand projections will extend to the year 2030; demand projections are required to be completed for each five-year interval. Supporting information for the contractor is outlined below. The specific tasks will include, but may not be limited to, those identified below:

A. Demand Projection Methodologies:

Task 1) The contractor is required to develop water demand projection methodologies for each of the following six water use sectors. The methodologies will be developed in close coordination with DRBC staff and documented in a written report.

- Public Water Supply (PWS)¹
- Industrial
- Mining
- Thermoelectric Power
- Hydroelectric Power
- Agriculture

With regard to the PWS sector, PADEP has already developed a database (MS Access) model for projecting water demands for public water supply; this has been used previously by PADEP and may be suitable for revising future projections. This tool uses population projection data (statewide population projections to 2030 at the municipal level have been developed by PADEP) as the principal driver of the water demand projections, but is also contingent on good estimates of per capita use (which can be derived from existing data) and accurate estimates of population served by public water supply systems (versus individual well and septic systems). An electronic version of the PWS projection model, including supporting documentation, will be provided to the contractor for testing and evaluation purposes. It is anticipated that the model will serve as a basis for demand projections for the PWS sector. The contractor will confirm the appropriateness of the model by testing it; the contractor will develop an alternative methodology if the model is deemed inappropriate.

For the remaining five sectors, methodologies will need to be developed in their entirety by the contractor.

In developing the projections methodologies the contractor is required to ensure that any datasets that are required to drive the forecasts (i.e., employment statistics, agricultural acreage data, etc.) are available in the public domain. It should also be noted that the chosen methodologies must be applicable state-wide. The contractor will take into account the following factors and forecasting considerations when developing the demand projection methodologies:

- normal / dry climate conditions
- annual average versus peak (day) demand conditions
- water conservation potential
- alternative planning scenarios or probabilistic projection methods

¹ In the context of this RFP, the term public water supply (PWS) includes water demands from any and all users that obtain their water supply from a water purveyor. Typically, PWS systems have a high proportion of residential customers, but may also include some commercial, industrial, agricultural and other uses. The other water use sectors listed in the bulleted list above are comprised of water users that have their own water supply source and do not include those served by PWS systems. This distinction reflects the way in which water use and registration data are collected by PADEP.

- sensitivity analysis
- data availability and data gaps

Although the appropriate geographic scale for demand projections may differ among sectors, the final water demand projections will need to conform to watershed units (minimum 15 square-miles) defined by PADEP during development of its Water Planning Screening Tool study in partnership with the USGS.

Historic water use datasets (approximately 1988 – 1997) are readily available for the contractor from PADEP databases (and can be supplemented if necessary with additional data from the DRBC and Susquehanna River Basin Commission (SRBC) databases). Data will be further supplemented with 2003 water use reports based on registration and reporting requirements of Act 220 legislation. It is estimated that datasets containing 2003 reported water use will become available in March, 2005. Water use data in Pennsylvania are generally not available for the period 1998 – 2002.

It should be noted that water use records for the agricultural sector are incomplete. There is currently no known baseline water use dataset available for agricultural water use.

B. Committee Review of Projection Methodologies:

As projection methodologies are developed by the contractor they will be subject to review and approval by the Critical Water Planning Area (CWPA) sub-committee, which is acting as a technical review panel for the projection methodologies. Throughout the contract period, the contractor will be expected to provide updates to DRBC staff every two weeks via email, telephone conference or meetings at DRBC offices in West Trenton, NJ, as appropriate.

Task 2.) The contractor shall develop presentation materials as necessary in support of the proposed projection methodologies for use at the CWPA meetings. The contractor will attend these meetings (held in Harrisburg, PA) and give presentations when necessary (a maximum of five meetings is anticipated).

C. Performing Demand Projections in a Pilot Study:

Once the methodologies have been approved, and updated withdrawal information is available from the Act 220 registration process, a pilot project will be conducted to project demand in selected watersheds in the Pennsylvania portion of the Delaware River Basin (DRB). The Commission reserves the right to award the following task based on an evaluation of the methodologies developed in Task 1.

Task 3.) The contractor shall develop (or identify for purchase if available) suitable software tools to facilitate the calculation of the demand projections. These tools should readily integrate with, or be based on, existing software packages such as MS Excel, MS Access and ArcGIS. The contractor is required to work with DRBC staff to implement the selected projection methodologies in a pilot study, most likely in the 1,361 square mile Lehigh Valley watershed in Pennsylvania.

NOTE: The Commission reserves the right to award Task 3 at a date that may be later than the awarding of Tasks 1 and 2, or may decide not to engage the services of the contractor for Task 3.

D. Timeframe

The demand projection methodologies (Task 1) must be developed by April 01, 2005. Task 3, if awarded to the contractor, needs to be completed by June 15, 2005.

E. Contents of Proposal and Qualifications:

Interested parties shall submit 10 copies of a) a proposal for this work including documentation of their qualifications and b) cost estimates (including completed Table 1) in a separate sealed envelope marked "Cost Proposal" to:

Richard C. Gore, Chief Administrative Officer
Delaware River Basin Commission
25 State Police Drive
P.O. Box 7360
West Trenton, NJ 08628

Submittals must be received at the Commission's offices no later than **4:00 p.m., Wednesday, December 29, 2004**. Proposals received after this time will not be considered.

The technical proposal must not exceed 10 pages (5 sheets, double-spaced, two-sided printing, font no less than 11.5 pt). The technical proposal should include an estimate of hours required for completion of each task and must indicate if sub-contractors are to be used. Supporting documentation is similarly limited to 20 pages (10 sheets, double-spaced, two-sided printing, font no less than 11.5 pt). Proposals and supporting documentation exceeding the specified page limit will not be considered. The cost proposal must include completion of Table 1 attached to this document. Should the Commission require additional services beyond those specified in this RFP, the consultant should include an hourly rate schedule for additional services for each of the three key tasks specified.

The qualifications shall demonstrate the firm's ability to perform the work and shall address, at a minimum, the following:

- Experience, reputation and demonstrated abilities
- Expertise pertaining to this project, such as water demand forecasting for multiple demand sectors and data collection and handling. Include details of similar studies; identify the client, costs and a brief description of the project.
- Capability to meet needs within the timeframe required
- Location of the office where work will be performed
- Familiarity with the Delaware River Basin and Pennsylvania water resources issues.

Consultants will be selected in accordance with Delaware River Basin Commission's procedure for selection for "Professional Services". Delaware River Basin Commission reserves the right to

reject any submittals. Attached is the Commission's standard contract. If the contractor cannot execute the contract in its current form, the contractor must describe the exceptions in the cost proposal.

Any questions should be directed to Dr. Kenneth F. Najjar, Head of the Planning & Implementation Branch, at (609) 883-9500 x256.

Table 1: Summary of Estimated Time and Costs per key task

Task		Estimated Labor		Materials cost (if applicable)	Total Task Cost
		Hours	Cost		
1	Water Demand Projection Methodologies for 6 key sectors				
2	CWPA Meetings / Presentations				
3	Software development and pilot study*				
				Total Costs:	

*NOTE: The Commission reserves the right to award Task 3 at a date that may be later than the awarding of Tasks 1 and 2, or may decide not to engage the services of the contractor for Task 3.

Signed: _____ Date: _____

Print Name: _____

Company Name: _____

AGREEMENT
BETWEEN THE DELAWARE RIVER BASIN COMMISSION
AND
FOR

AGREEMENT made this day of , 200 , pursuant to the provisions of the Delaware River Basin Compact, by and between the DELAWARE RIVER BASIN COMMISSION ("Commission"), acting by and through its Executive Director, and _____ . ("Contractor") herein sometimes referred to jointly as "the Parties."

WITNESSETH:

WHEREAS,

WHEREAS,

WHEREAS,

WHEREAS,

WHEREAS,

NOW, THEREFORE, in consideration of the promises and undertakings hereinafter set forth,

THE PARTIES DO MUTUALLY AGREE AS FOLLOWS:

1. Employment of Contractor. The Commission hereby agrees to engage the Contractor, and the Contractor hereby agrees to perform the services hereinafter set forth.

2. Scope of Services.

(a) The Contractor shall in a satisfactory and proper manner as determined by the Commission, conduct the work outlined in the Commission's Request for Proposal ("RFP") (incorporated herein as Attachment 1) in accordance with procedures outlined in the Contractor's Proposal dated _____ (incorporated herein as Attachment 2). In cases where the Contractor believes that modifications to the work as outlined in the Commission's RFP or in the Contractor's Scope of Services are necessary to improve the final product, such modifications shall be approved by the Commission staff prior to implementation, in accordance with Section 13, below.

3. Deliverables to be Furnished by Contractor to Commission. In addition to the deliverables specified in the Contractor's Scope of Services, the Contractor shall submit:

[THIS SPACE LEFT BLANK]

4. Use of Recycled Paper. The Contractor shall use recycled paper for all reports which are prepared as part of this agreement.

5. Supervision. Supervision of this Agreement for the Commission will be under the direction of _____.

6. Personnel.

(a) The Contractor represents that it has employed or will employ, at its own expense, all personnel required in performing the services under this Agreement. Such personnel will be employees of the Contractor and shall not be considered employees of or have any contractual relationship with the Commission.

(b) All of the services required hereunder shall be performed by the Contractor or under its supervision and all personnel engaged in the work shall be fully qualified to perform the tasks assigned and, to the extent necessary, shall be authorized or licensed under State and local law to perform such services.

(c) None of the work or services covered by this Agreement shall be subcontracted unless prior written approval of the Commission has been obtained.

7. Representation Before Sponsoring Agencies. The Contractor agrees that it will not appear before or represent any party before any of the following agencies for the purpose of providing or interpreting information obtained or produced as a result of performing services under this contract without the written consent of that agency: Delaware River Basin Commission, New Jersey Department of Environmental Protection, Delaware Division of Natural Resources and Environmental Control, Pennsylvania Department of Environmental Protection and United States Environmental Protection Agency.

8. Time of Performance. The Contractor shall commence work under this Agreement as soon as practicable after the execution of the Agreement. The Agreement shall be undertaken in such manner as to assure its expeditious completion, but in any event all of the services shall be completed not later than _____.

9. Compensation. The total payable to the Contractor by the Commission for the services required under this Agreement shall be \$ _____. This sum will be funded through

10. Time of Payment.

(a) The Commission shall pay the Contractor upon proof of satisfactory progress for each of the components listed in the Contractor's Scope of Services and the Contractor's Schedule of Hourly Rate. Payment shall be made within 30 days following submission of an invoice, as long as the invoice is submitted no later than the 15th of the month beginning in _____ 2004. The invoice shall be in such form as may be required by the Commission and approved by the Executive Director. Billing shall be based each month on the percent of the work completed. Ten percent of each payment shall be withheld pending completion and acceptance by the Commission of all final reports. *The Contractor shall submit satisfactory documentation to the Commission of the in-kind contributions with the final bill.*

(b) In no case shall the Commission make any payment to the Contractor unless the Commission has received sufficient funds from the _____.

11. Termination of Agreement for Cause.

(a) In addition to any other rights established by law, the Commission shall have the right to terminate this Agreement if the Contractor fails to fulfill in a timely and proper manner

its obligations under this Agreement or violates any of the provisions of this Agreement. The Commission shall exercise this right to terminate by giving written notice of termination to the Contractor, specifying the effective date of termination. The Contractor shall cease to perform any work or services for the Commission under this Agreement as of the specified date of termination.

(b) In the event of a termination under subsection (a) hereof, the Contractor shall be entitled to just and equitable compensation only for such work as has been satisfactorily performed, completed and actually delivered to the Commission prior to the date of termination, subject to the further provisions of subsection (c) hereof, and in no event shall the amount payable to the Contractor exceed the amount that would be payable under Section 9 hereof. The Commission shall be entitled upon demand to immediate possession of any finished or unfinished work product that is in the control of the Contractor at the date of termination. In the event of termination under this subsection, the Contractor shall receive compensation on the same basis and to the same extent as provided herein for work already in the possession of the Commission, provided that the Contractor may retain copies of original drawings and specifications for its internal business use.

(c) The Commission's election to terminate this Agreement under subsection (a) above shall not relieve the Contractor of its liability to the Commission under this Agreement for damages sustained by the Commission as a result of the Contractor's failure to perform or breach of this Agreement. The Commission, in addition to any other rights it shall have, may deduct from any amounts otherwise payable to the Contractor or may recover from the Contractor any costs or expenses incurred to complete the work and services required of the Contractor under this Agreement.

12. Termination of Agreement.

(a) The Commission shall have the right to terminate this Agreement for any reason, including, but not limited to, the fact that appropriations, grants or other funds necessary for the financing of this Agreement are not made available to the Commission, but such termination shall not be effective until the Contractor is given at least fifteen days' written notice of the Commission's decision to terminate the Agreement.

(b) In the event of a termination under subsection (a) hereof, the Contractor shall be entitled to be compensated for all work performed and completed as of the date of termination,

but in no event for an amount greater than provided in Section 9 hereof. Any amounts that previously had been withheld by the Commission for such work shall be payable to the Contractor. In addition, the Contractor shall be entitled to be reimbursed for any actual out-of-pocket expenses incurred by the Contractor prior to termination which are directly attributable to any uncompleted portions of work or services covered by this Agreement. The Commission shall be entitled upon demand to immediate possession of any finished or unfinished work product that is in the control of the Contractor at the date of termination, in which event the Contractor shall receive compensation on the same basis and to the same extent as provided herein for work already in the possession of the Commission, provided that the Contractor may retain copies of original drawings and specifications for its internal business use.

13. Changes. The Commission may, from time to time, request changes in the scope of the services to be performed hereunder by the Contractor. Such changes, including any increase or decrease in the amount of the Contractor's compensation, which are mutually agreed upon by and between the Commission and the Contractor, shall be incorporated in written amendments to this Agreement.

14. Contractor's Performance Standards. The Contractor shall have full professional and technical responsibility for performance of its services as provided herein in accordance with recognized professional standards of good practice.

The Contractor shall be responsible for the cost of correcting and modifying its services which fail to meet the foregoing standards.

The Contractor shall reimburse the Commission for all costs incurred by it to correct, modify or redesign any product submitted by the Contractor that as a result of a negligent act, error or omission on the part of the Contractor, its agents, servants or employees is found to be not in accordance with the provisions of this Agreement.

15. Insurance Provided by the Contractor. The Contractor shall provide, during the term of this Agreement, insurance applicable to its operations as follows:

(a) Worker's Compensation with statutory limits, and Employer Liability Insurance with a limit of \$1,000,000 per accident to provide for payment to the Contractor's employees in connection with the services covered by this Agreement and/or their dependents, of Worker's Compensation benefits, including, when required, Occupational Disease benefits in accordance with applicable law including the Applicable law shall include but shall not be limited to the U.S. Longshoremen's and Harbor Workers' Compensation Act and the Jones Act.

(b) Comprehensive General Liability Insurance on standard bureau form excluding professional liability but including Premises-Operations, Contractual Liability, Owner's and Contractor's Protective Liability, and Completed Operations Insurance, with a combined single limit of \$1,000,000 each occurrence and annual aggregate, for bodily injury and/or personal injury, including death and property damage.

(c) Comprehensive Automobile Public Liability Insurance (including owned, non-owned, and hired automobiles) with a combined single limit for bodily injury, death and property damage of \$1,000,000 per accident. This policy also provides coverage for

Automobile Comprehensive, Fire and Theft insurance subject to a \$100 deductible and Collision insurance subject to a \$200 deductible on owned commercial vehicles.

(d) The Contractor shall maintain from the start of this Agreement until three (3) years after completion of this Agreement, a project professional liability insurance policy with limits of \$1,000,000 for any one claim and in the aggregate for the project.

(e) The Contractor shall provide the Commission, upon execution of this Agreement, the appropriate certificates of insurance, as outlined above, and adding the Commission as an additional insured for the term of this Agreement.

16. The Contractor, or any subcontractor, agrees to indemnify the Commission pursuant to item 17, herein.

17. Indemnification. The Contractor agrees to indemnify and save harmless the Commission and its agents, servants and employees for and from all claims, demands, suits, actions, recoveries, and judgments of every name and description, brought, recovered or extracted against it, for, or on account of any injuries or damages received or sustained by any party or parties by reason of any negligent act or omission of Contractor or of any agent or servant of Contractor, in or incident to the performance of the services under this Agreement, or by or in consequence of any negligence or carelessness in carrying out the same; or on account of the death of or injury to the person, or damages to the property of Contractor, or any of the agents, servants or employees of Contractor who shall be engaged in or about the work to be performed under this Agreement.

18. Non-discrimination. There shall be no discrimination against any employee who is employed in the work covered by this Agreement, or against any applicant for such employment, because of race, religion, color, sex or national origin. This provision shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection of training, including apprenticeship. The Contractor shall insert a similar provision in all subcontracts for services covered by this Agreement.

19. Assignability. The Contractor shall not assign any interest in this Agreement, and shall not transfer any interest in this Agreement (whether by assignment or novation) without the prior written consent of the Commission thereto; provided, however, that claims for money due or to become due the Contractor from the Commission under this Agreement may

be assigned to a bank, trust company, or other financial institution without such approval. Notice of any such assignment or transfer shall be furnished promptly to the Commission.

20. Interest of Contractor. The Contractor covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of his services hereunder. The Contractor further covenants that in the performance of this Agreement no person having such interest shall be employed.

21. Release of Findings. Any draft reports, information, data, etc., given to or prepared or assembled by the Contractor under this Agreement shall not be made available to or used for any individual or organization by the Contractor until it has been accepted in final form as determined by the Commission. Written notification by the Commission to the Contractor or payment in full for the services rendered under this Agreement shall signify acceptance in final form.

22. Ownership and Copyright of Computer Programs and Study Reports, Etc. The computer programs, data and other work products produced by the Contractor under this Agreement shall be the property of the Commission. No report, document or other data produced in whole or in part with Study funds shall be copyrighted by the Contractor nor shall any notice of copyright be registered by the Contractor in connection with any report, document or other data developed by it for the Study. This section does not restrict the investigator's right to publish in scientific journals or to present papers at conferences and submit them for publication in conference proceedings.

23. Compliance with Compact and Other Laws. In the performance of this Agreement, the Contractor shall comply with all of the requirements of the Delaware River Basin Compact and, without limitation thereto, the provisions of Sections 15.1(i) and 15.1(j) of Public Law 87-328, 75 Stat. 688, and shall comply with all other applicable provisions of State and Federal laws.

24. Utilization of Small, Minority and Women's Business Enterprises. The Commission is required to ensure to the fullest extent possible that at least a "Fair Share" equal to 8% of Federal funds (MBEs 3%, WBEs 5%) for prime contract or subcontracts for supplies, construction, equipment or services is made available to organizations owned or controlled by socially and economically disadvantaged individuals, women and historically black colleges and universities. The Commission will require and the Contractor agrees to include

in its bid documents the negotiated "Fair Share" percentages and require all of its prime contractors to include in their bid documents for subcontracts the negotiated "Fair Share" percentages.

IN WITNESS WHEREOF, the Commission and the Contractor have executed this Agreement as of the date first above written.

ATTEST:

DELAWARE RIVER BASIN COMMISSION

Pamela M. Bush, Esq. Secretary

BY _____
Carol R. Collier, Executive Director

Approved as to form and legal sufficiency
this day of , 2005.

BY _____

Pamela M. Bush, Esq. Assistant General Counsel
Delaware River Basin Commission